Collaboration Tools

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SCD Projects Meeting
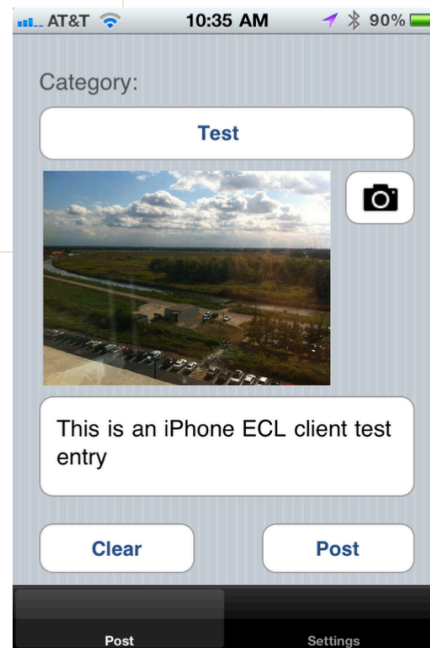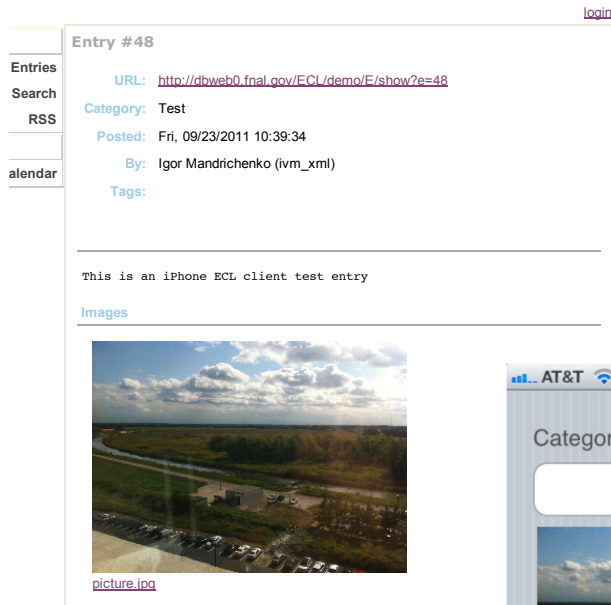
3/20/2013

Applications

- Electronic Logbook
- Shift Scheduler
- Speakers Bureau
- Members Database
- Publishing Board

Electronic Logbook

- Started as D0 Control Room Logbook
- Suzanne Gysin added web GUI
- Revamped in 2010-2011
  - Completely new software stack
  - Move all data from HTML/XML files to database
  - Became Electronic Collaboration Logbook (ECL)
- 29 on site instances
  - Including hosted LSST Camera
  - Plus 1 external DES instance in Chile
- March 4 Fermilab Today article
- CHEP2012 presentation and paper

"There is an app for that!"
-- Apple iPhone commercial

- iOS ECL client (Sept 2011)
- Uses published XML/HTTP ECL interface – same interface used to make automated entries
  - Post an entry
  - Take pictures with the camera, attach to the entry
- We can not distribute it because of legal issues between DOE and Apple
  - some progress is being made lately
- Less developed Android app

Shift Scheduler

- Started per NOvA request
- Requirements from NOvA and DES
- Added to ECL as an extension
- Shares the list of collaboration members with ECL
  - Members Database

Speakers Bureau

- Who made what presentations on behalf of the collaboration, when, where ?
- D0 (legacy) and DES (new development, funded by DES, but seems to be generic enough)
- Uses external list of users – Members Database prototype

Publication Board

- Keeps track of publications made by the collaboration, tracks the publication process

- Being developed for DES, funded by DES

- Requirements discussion stage

- Uses external list of users – Members Database

Where do they fit

- Each collaboration is unique and yet they follow similar rules, organized in similar way
- The are trying to build tools usable by many experiments to help them organize their life and produce results in
  - Simulation, data taking, processing and analysis – logbook, shift scheduler
  - Publishing – Publication Board, Speakers Bureau
  - Running the collaboration – Shift Scheduler, Members Database

Software Stack

- Apache httpd
- Django (database a.k.a. "model" module, sessions mechanism)
- Jinja2 templates
- Object publishing layer (ours)
- Python
- WSGI (used to be mod_python)
- Postgres
- Web server redundancy infrastructure (ours)
- HTML, JavaScript, CSS, AJAX

Future Development

- Improvements for ECL
  - Issues list in RedMine (see CRL project)
  - Better integration with Shift Scheduler
    - Who was on shift when the entry was created ?
    - Shift-related entries
- Finish development of SB and PB for DES
  - More generic Publication Board ?
    - No resources to work on this

Future: Members Database

- List of members, institutions
- Members status
- Authentication/authorization, identity management
  - Open authentication service (OAuth, or similar)
  - DES Requirements for IM – DocDB 4732 by Mine
- Split out Members Database into a separate application
- Integrate other applications with Members Database

Future: Mobile apps

- We have iOS ECL client
- Less developed Android ECL client
- Expand functionality
  - Browse entries, push notifications, etc.
  - Geotag entries ?
- Shift Scheduler
  - Notifications, integration with calendar
- Dashboards
  - Mobile and desktop

Future: Web interface for mobile devices

- Instead of, or in addition to mobile client apps
- Web GUI built for the mobile browser
- No need to go through AppStore or GooglePlay
- No resources to look into this

Computer/Human Interface

- HTML5, CSS, CSS3, JavaScript, AJAX
  - We need to master these technologies to create more dynamic, more intuitive, more convenient GUI
- We do not have resources to allocate to this area of research